ABSTRACT

A non-monolithic ring laser cavity comprising: (a) a gain medium (1); (b) a first polarisation rotation element arranged to rotate the polarisation of light propagating in the cavity with a predetermined handedness irrespective of the direction of propagation of the light; (c) a second polarisation rotation element (7) arranged to rotate the polarisation of light propagating in the cavity with a handedness which is dependent upon the direction of propagation of the light; (d) a polarisation selection element (5, 6) arranged to cause loss to light propagating in the cavity, the loss being determined by the polarisation of light incident upon the polarisation selection element; wherein the polarisation selection element comprises at least one mirror spaced away from the gain medium (1) and arranged to reflect light at an angle displaced from the normal such that the reflectivity of the at least one mirror is sufficiently polarisation dependent that the laser oscillates uni-directionally.